

REMARKS

This Response is submitted in reply to the non-final Office Action dated October 20, 2006. No fee is due in connection with this response. The Director is authorized to charge any additional fees which may be required, or to credit any overpayment to Deposit Account No. 02-1818. If such a withdrawal is made, please indicate the Attorney Docket No. 115808-365 on the account statement.

Claims 1, 3-4, 6, 8, 10-11, 14, 16, 18 and 63-64 are pending in this application. Claims 2, 5, 7, 9, 12-13, 15, 17 and 19-22 were previously canceled. Claims 23-62 were previously withdrawn. In the Office Action, Claims 1 and 4 are rejected under 35 U.S.C. §112, first paragraph, Claims 1, 4, 6, and 10 are rejected under 35 U.S.C. §102 and Claims 1, 3-4, 6, 8, 10-11, 14, 16, 18 and 63-64 are rejected under 35 U.S.C. §103. For the reasons set forth below, Applicants respectfully submit that the rejections should be withdrawn.

In the Office Action, Claims 1 and 4 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. To satisfy the written description requirement, a patent specification must describe the claimed invention with sufficient description of a representative number of species by actual reduction to practice, reduction to drawings, by disclosure of relevant identifying characteristics, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination thereof sufficient to show that one skilled in the art can reasonably conclude that Applicants had possession of the claimed genus. See M.P.E.P. § 2163 IL43(a)(ii).

Specifically, the Patent Office first alleges that Claims 1 and 4 are drawn to plant material and to the plant family *Asteracea* but that the specification lacks sufficient disclosure to be in possession of the genus at the time of filing. Applicants respectfully disagree. The description of a representative number of species does not require the description to be of such specificity that it would provide individual support for each species that the genus embraces. See M.P.E.P. § 2163 IL43(a)(ii). The Patent Office also alleges that the specification only provides one embodiment (*i.e.* chicory). See Office Action, page 2, line 24 and page 3, line 1. Contrary to the Patent Office's assertion, Applicants' specification discloses more than merely one embodiment.

For example, there exists many species of plants in the *Asteracea* family that contain phytochemical agents as claimed. However, contrary to the Patent Office's assertion that the Applicants' specification only discloses one species, Applicants actually disclose several species

of Asteracea that contain phytochemical agents as claimed, including, for example, chicory, lettuce, Jerusalem artichoke, extracts thereof and combinations thereof. See, Specification, page 7, lines 20-29.

In addition, contrary to the Patent Office's assertion that Applicants' specification only discloses one plant material, Applicants actually disclose several plant materials (i.e. plant materials outside the Asteracea family) that contain phytochemical agents as claimed, including, for example, coffee, soja, leek, asparagus, extracts thereof and combinations thereof. See, Specification, page 2, lines 26-27.

Furthermore, because the specification teaches a number of plant materials containing one or more prebiotic fibers and phytochemical agents capable of inhibiting enzyme activity, other similar types of plant material known by the skilled artisan can be used in accordance with the present claims. In other words, Applicants' disclosure provides support for a variety of plant materials according to relevant identifying characteristics and by functional characteristics coupled with a known or disclosed correlation between function and structure or by a combination thereof to show possession of the claimed genus "plant material."

Regarding this written description requirement, Applicants respectfully submit that one having ordinary skill in the art would understand that Applicants possessed the claimed subject matter at the time of filing Applicants' specification. Based on at least these noted reasons, Applicants believe that Claims 1 and 4 fully comply with 35 U.S.C. §112, first paragraph. Accordingly, Applicants respectfully request that the rejection of Claims 1 and 4 under 35 U.S.C. §112, first paragraph, be withdrawn.

In the Office Action, Claims 1, 4, 6 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,592,033 to Anantharaman et al. ("*Anantharaman*"). Applicants believe this rejection is improper and respectfully traverse it for at least the reasons set forth below.

Independent Claim 1 is directed, in part, to a thermally processed plant material that includes one or more phytochemical agents capable of inhibiting inflammation in a mammal. In contrast, Applicants respectfully submit that *Anantharaman* fails to disclose or suggest every element of the present claims.

Applicants respectfully disagree with the Patent Office's statement that the term "thermally processed" can also mean "extruded". See, Office Action, page 3, lines 17-19.

Applicants actually disclose that the term “thermally processed” means heating the plant raw material above standard temperature (e.g., 25 Celsius or 278 Kelvins) in a dedicated device, such as oven or extruder, or any similar device capable of increasing the temperature of the treated material. See Specification, page 7, lines 15-19. Furthermore, “thermally processed” can mean treating the plant material at above standard temperatures in a dedicated device such that one or more phytochemical agents capable of inhibiting at least one of enzymatic and transcriptional activity to inhibit inflammation in a mammal are thereafter maintained in the composition. See Specification, page 7, lines 15-19 and Claim 1.

Applicants respectfully submit that *Anantharaman* fails to disclose or suggest the thermal process of the claimed invention. For example, *Anantharaman* discloses treating a plant material via a process where the material must be gelatinized in order to remove or destroy the sesquiterpene compounds present in the inulin-containing plant material. See *Anantharaman*, column 6, lines 31-34. *Anantharaman* fails to disclose a thermal process where one or more sesquiterpene compounds are thereafter maintained in the composition. In contrast, Applicants’ claimed invention discloses a thermal process where one or more phytochemical agents capable of inhibiting at least one of enzymatic and transcriptional activity to inhibit inflammation in a mammal (such as sesquiterpene lactones) are thereafter maintained in the composition. See Specification, page 8, line 23 to page 9, line 3. Since the claimed invention discloses a thermal process in which sesquiterpene lactones can survive in the composition while *Anantharaman* discloses a process which destroys all such compounds, Applicants’ thermal process and *Anantharaman*’s thermal process must be different.

In view of the previous discussion, Applicants respectfully submit that the cited reference fails to disclose or suggest all of the elements of independent Claim 1. For example, *Anantharaman* fails to disclose or suggest a thermally processed plant material that includes one or more phytochemical agents capable of inhibiting at least one of enzymatic and transcriptional activity to inhibit inflammation in a mammal as required, in part, by independent Claim 1. By contrast, *Anantharaman* discloses gelatinizing the composition ingredients which include sesquiterpene lactones where the gelatinizing process destroys the sesquiterpene lactones as well. See, *Anantharaman*, column 2, lines 25-45. Though *Anantharaman* may provide some benefit to mammals, it cannot provide the benefits in accordance with the Applicants’ claimed invention because, by destroying the sesquiterpene lactones during the gelatinizing process, *Anantharaman*

removes the elements necessary to inhibit inflammation in mammals. See, *Anantharaman*, column 6, lines 31-34. Furthermore, *Anantharaman* fails to disclose other phytochemical agents (besides sesquiterpene lactones) capable of inhibiting at least one of enzymatic and transcriptional activity to inhibit inflammation in a mammal which remain in the composition. Thus, *Anantharaman* cannot anticipate the novel elements of Claim 1.

Applicants also disagree with the Patent Office's argument that using the claimed composition to inhibit inflammation in a mammal is an intended use of a composition which will not further limit claims drawn to a composition. The Patent Office states that Applicants' invention must result in structural differences from the prior art in order to distinguish the claimed invention from the prior art, and that if the prior art structure is capable of performing the intended use then it meets the claim. Structurally, the present claims require, in part, one or more phytochemical agents capable of inhibiting at least one of enzymatic and transcriptional activity to inhibit inflammation in a mammal. By contrast, the prior art discloses a composition without any sesquiterpene lactones left in the composition capable of inhibiting cyclooxygenase activity to inhibit inflammation in a mammal. These are significant structural differences, considering that the inflammation inhibiting nature of the present claims is a unique aspect of the invention and is not disclosed or suggested in the prior art. Regarding intended use, the present claims, in part, aim to preserve during the thermal process the phytochemical agents capable of inhibiting inflammation in a mammal. On the other hand, *Anantharaman* aims for the opposite, which is to destroy the sesquiterpene lactones in the composition capable of inhibiting inflammation in a mammal. See, *Anantharaman*, column 6, lines 31-34 and Specification, page 8, line 23 to page 9, line 3. Furthermore, in a previous non-final Office Action dated June 21, 2006, the Patent Office admits that *Anantharaman* fails to disclose a plant extract used to inhibit inflammation. See Office Action, June 21, 2006, page 5, lines 25-26. For the reasons discussed above, Applicants respectfully submit that *Anantharaman* fails to disclose or suggest all of the elements of the claimed invention.

In the Office Action, Claims 1, 3-4, 6, 8, 10-11, 14, 16, 18 and 63-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,645,534 to Hermand ("*Hermand*") in view of *Anantharaman* in further view of U.S. Patent 5,905,089 to Hwang et al. ("*Hwang*"). Applicants believe this rejection is improper and respectfully traverse it for at least the reasons set forth below.

Independent Claims 1 and 11 are directed, in part, to a thermally processed plant material that includes one or more phytochemical agents capable of inhibiting inflammation in a mammal. Independent Claim 63 is directed, in part, to a thermally processed plant material that includes an active fragment capable of inhibiting inflammation in a mammal. In contrast, Applicant respectfully submits that there is no suggestion or motivation to combine the cited references to obtain the present claims, and even if combinable, all of the claimed elements are not taught or suggested by the cited references.

Applicants respectfully submit that there is no suggestion or motivation to combine *Hermand* and *Anantharaman* and to obtain the rejected claims because the cited references are directed to unrelated inventions. For example, *Hermand* is directed to a toothpaste or mouthwash capable for use in the oral cavity for inhibiting gum inflammation and dental plaque through anti-inflammatory and anti-microbial properties in its product. See, *Hermand*, column 1, lines 25-30. *Anantharaman*, by contrast, is directed to providing a gelatinized cereal product capable of providing beneficial effects to the gastro-intestinal tract of humans and pets. See, *Anantharaman*, column 1, lines, 7-17. Applicants respectfully disagree with the Patent Office's statement that one would have been motivated to combine the references to use chicory extract to obtain sesquiterpene lactones along with a starch, a protein, and a fat in composition because the known anti-inflammatory properties that chicory contains and the addition of starch, protein and fat would allegedly make the composition more palatable for ease of administration. See, Office Action, page 5, line 6. Contrary to the Patent Office's assertion, one of ordinary skill in the art would not be motivated to add a starch source, a protein source, or a fat source from a food product to a toothpaste or mouthwash in order to make the toothpaste or mouthwash more palatable for ease of administration because toothpaste and mouthwash are not food and are not intended to be ingested.

Applicants also respectfully submit that even if combinable, the cited references fail to disclose or suggest all of the elements of the claimed invention. For example, *Hermand* fails to disclose a plant material that is thermally processed as required, in part, by independent Claims 1, 11 and 63. As discussed above, the term "thermally processed" requires heating the plant raw material above standard temperature (e.g., 25°C or 278 Kelvins) in a dedicated device. See Specification, page 7, lines 15-19. By contrast, *Hermand* discloses an extraction process at temperatures between 0°C and 6°C. See *Hermand*, column 1, lines 33-35. Contrary to the

Patent Office's assertion, *Hermand* does not disclose a hot or thermal extraction method. See Office Action, page 4. Instead, *Hermand* discloses extraction at low temperatures because low temperatures allow good preservation of the resulting extract without the addition of preservative and also avoid thermal degradation of the chicory. See *Hermand*, column 1, lines 56-63. Moreover, as discussed above, *Anantharaman* fails to disclose a "thermal process" as required in the claimed invention. *Hwang* also fails to disclose a thermal process at all. Therefore, the cited references fail to disclose or suggest all of the elements of the claimed invention.

Applicants respectfully submit that the Patent Office has improperly applied hindsight reasoning by selectively piecing together teachings of each of the references in an attempt to recreate what the claimed invention discloses. As the Federal Circuit explained, "the mere fact that the prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, at 1783-17. One cannot use "hindsight reconstruction to pick and choose among isolated disclosures in the prior art" to re-create the claimed invention. *In re Fine*, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988).

For at least the reasons discussed above, Applicants respectfully submit Claims 1, 4, 6 and 10 are novel, nonobvious and distinguishable from the cited references. In addition, the combination of *Hermand* in view of *Anantharaman* and *Hwang* is improper. Moreover, even if combinable, the cited references do not teach, suggest, or even disclose all of the elements of independent Claims 1, 11 and 63 and Claims 3-4, 6, 8, 10, 14, 16, 18 and 64 that depend from these claims, and thus, fails to render the claimed subject matter obvious.

Accordingly, Applicants respectfully request that the rejections of Claims 1, 4, 6 and 10 under 35 U.S.C. §102 be withdrawn and that the obviousness rejection with respect to Claims 1, 3-4, 6, 8, 10-11, 14, 16, 18 and 63-64 be reconsidered and withdrawn.

For the foregoing reasons, Applicants respectfully request reconsideration of the above-identified patent application and earnestly solicit an early allowance of same.

Respectfully submitted,

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